



Helping Babies Survive in the Context of Congenital Zika Syndrome in Latin America and the Caribbean

June 2019

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Background

The Helping Babies Survive (HBS) initiative of the American Academy of Pediatrics (AAP) consists of three training and implementation modules that address essential newborn care. Essential Care for Small Babies (ECSB) focuses on premature and low-birthweight babies; Helping Babies Breathe (HBB) teaches basic newborn resuscitation; and Essential Care for Every Baby (ECEB) focuses on care at birth, postnatal care, and treatment of infections. The Latin American and Caribbean (LAC) Neonatal Alliance led the introduction of HBS in Latin America and the Caribbean (LAC) in recent years, providing a foundation for subsequent Maternal and Child Survival Program (MCSP) Zika response activities related to HBS. As intrauterine infection with Zika virus may be associated with low birthweight, prematurity, and feeding difficulties, health systems needed a rapid way to build the capacity of health providers and families to care for infants that may be affected by these complications. Additionally, the outbreak resulted in a large volume of health providers expected to care for CZS-affected infants without the benefit of Zika-specific pre-service education and only limited in-service education. Thus, integrating content on identifying and caring for infants potentially affected by CZS through ECSB was important for capacity-building activities.

HBS Introduction in LAC

During the 2010 HBB launch in Washington, DC, the LAC Neonatal Alliance, under the United States Agency for International Development (USAID)-supported Maternal and Child Health Integrated Program's (MCHIP) leadership, was identified as the mechanism for dissemination of tools and resources in the LAC region. Together with Alliance partners, the project translated HBS materials into Spanish and adapted images to be region-specific, simultaneous with the launch of each module by the AAP. MCHIP and then MCSP led regional trainings of trainers and national trainings in several countries (Dominican Republic, Colombia, Peru, and Guyana) and served as the focal point for information for other stakeholders implementing HBS in LAC. Case studies from Colombia and the Dominican Republic were published in the *Helping Babies Breathe: Lessons learned guiding the way forward*. As the ECEB and ECSB modules were added, MCSP led the translation and dissemination of these modules in the region. A description of suggested quality improvement approaches was also added to the strategy and discussed in trainings.

HBS-Related Activities in the MCSP Zika Response

HBS is an ideal initiative for increasing health care provider knowledge and newborn survival in emergency settings, making it a good fit for the Zika response. In 2017, the first national trainings of trainers (TOT) for ECSB were conducted in USAID-identified priority countries for the Zika response in Latin America, including Guatemala, El Salvador, and Paraguay (Table 1). In October 2017, MCSP facilitated a regional training of trainers in collaboration with the Colombian Association of Perinatology, in Cartagena, Colombia, as part of MCSP LAC Bureau activities.

In 2018, MCSP planned the introduction of ECSB in five USAID priority countries in the Eastern and Southern Caribbean (ESC) region: Trinidad and Tobago, Barbados, Guyana, St. Lucia, and Grenada. Information on CZS, including identification and management of affected newborns, was integrated into course content, as well as updates on local Zika outbreaks. Local partners for these activities included ministries of health (MOHs), the Caribbean Regional Midwives Association, and the Trinidad and Tobago Association of Midwives. Local MOHs and other partners facilitated import of training materials and equipment and provided instructors.

In April 2018, MCSP facilitated a regional workshop in Port-of-Spain, Trinidad and Tobago. This event hosted 29 participants from nine countries, including the five MCSP-supported countries, as well as Antigua and Barbuda, Dominica, St. Kitts and Nevis, and St. Vincent. Instructors from this group returned to their respective countries to train additional local instructors with support from MCSP headquarters. During all ECSB workshops, MCSP provided guidance on prevention of Zika virus infection, using the MCSP briefer, [*Zika virus prevention: Key points when counseling women of reproductive age*](#).



Objective structured clinical evaluations in Barbados. (Photo Credit: Rebecca Bardet)

Table 1. Essential Care for Small Babies Trainings in Latin America and the Caribbean

Country	Date	Instructors' countries of origin	Number of participants
El Salvador	May 2017	El Salvador, USA	33
Paraguay	August 2017	Paraguay, USA	34
Guatemala	November 2017	Guatemala, El Salvador, USA	28
St. Lucia	June 2018	St. Lucia, USA	23
Guyana	July 2018	Guyana, USA	22
Trinidad and Tobago	September 2018	Trinidad and Tobago, USA	27
Grenada	November 2018	Grenada, USA	30
Barbados	November 2018	Barbados, Trinidad and Tobago, USA	29

As Guyana had previous experience introducing HBS modules, the Guyana Ministry of Public Health (MOPH) requested that MCSP conduct health provider training in the hinterlands area of Kamarang for HBB, ECEB, and ECSB. In July 2018, 22 participants (physicians, nurses, community midwives, and Medex) were trained by three national trainers and one MCSP trainer from headquarters. Pre- and post-test scores demonstrated good knowledge transfer across HBS modules: HBB 41%–100%; ECEB 41%–100%; ECSB 0%–100%. Trainers ensured that all participants acquired the competencies in the trainings using clinical scenarios. MCSP donated equipment and training materials to increase the likelihood that participants would continue to practice their new skills in the workplace. Neonatal resuscitation equipment was donated to all facilities in Kamarang, Guyana. MOHs and the Caribbean Regional Midwives Association committed to continue to roll out HBS trainings and quality improvement activities. As health providers demonstrated very limited knowledge of CZS, additional related content was widely discussed and appreciated, including correct measurement of head circumference. MCSP emphasized the importance of identification and follow-up of suspected and probable CZS cases at all levels of the health system.

Through HBS trainings with integrated Zika-related content, MCSP addressed knowledge gaps related to essential newborn care and CZS in the ESC. National ECSB trainings received overall positive feedback from participants across four countries (Barbados, El Salvador, Grenada, and Trinidad and Tobago). Participants rated a variety of aspects of the workshop and were encouraged to provide open-ended feedback on strengths and areas for improvement. Across all countries, participants rated the workshops highly in each of five areas (impact on knowledge and skills, educational materials, structure, content, and organization). No substantial inter-country differences were noted in this evaluation; among the highest rated aspects of the training was the combination of teaching, group discussions, and practice. Many participants commented that the interactive structure allowed for hands-on learning with the materials and equipment and facilitated immediate application and reinforcement of new skills and knowledge. Participants also rated highly the instructional content and value, and many commented that they learned new information and gained confidence to train their colleagues in new practices. Finally, participants provided high ratings on the educational materials, including provider guides, flipcharts, and action plans. Participants reported that the neonatal simulators and equipment were particularly helpful for applying what they had learned.

A key positive outcome of ECSB activities has been the opportunity for regionally-based technical assistance. Additionally, ESC countries will benefit from a list of ECSB and ECEB instructors by country that will allow for further knowledge sharing across the ESC region.

Recommendations

- Promote continued use of and practice with HBS educational materials and equipment to support sustainability of knowledge and skills.
- Engage regional instructors trained by MCSP in future HBS activities.
- Integrate ECSB curricula into health providers' pre-service training and continuing education, conduct regular refresher trainings, and integrate ECSB checklists within the NICU, labor ward, postnatal ward, and health clinic guidelines and records to facilitate provision and documentation of key aspects of care.
- Include a wide range of staff, including facility leadership, when introducing new interventions such as ECSB, and communicate the value of conducting cascade trainings in the facility.
- Where possible, solicit high-level endorsement (e.g., via a letter from MoH to facilities) to promote novel clinical approaches and guidelines.

This brief is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of the Cooperative Agreement AID-OAA-A-14-00028. The contents are the responsibility of the Maternal and Child Survival Program and do not necessarily reflect the views of USAID or the United States Government.